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July 23, 2007  
Montréal, Canada

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANTS: Andrew Vaillant et al.  
ASSIGNEE: REPLICOR INC.  
SERIAL NUMBER: 10/661,088  
TITLE: ANTIVIRAL OLIGONUCLEOTIDES TARGETING HBV  
FILING DATE: September 12, 2003  
ART UNIT: 1648  
EXAMINER: PENG, Bo

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR § 1.97(d)**

Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450  
Sir:

Submitted herewith on a PTO/SB/08A form is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR § 1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR §§ 1.97(d).

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR § 1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is

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determined to be a *prima facie* prior art reference against the claims of the present application.

The Applicants also submit that no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned person after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR § 1.56(c) more than three months prior to the filing of the information disclosure statement.

### **STATEMENT OF RELEVANCY**

WO 02/068582

The teaching of the inventors in the WO 02/068582 publication relates to the development of more stable and nuclease-resistant sequence dependent (or sequence complementary) antisense oligonucleotides that also have a higher affinity to mRNA. As a result, the inventors designed oligonucleotides containing six-membered azasugars (see page 10, lines 17-24 in WO 02/068582). As cited in Table 1 of WO 02/068582, random oligonucleotides containing six-membered azasugars (SEQ ID NOs: 20-24) are disclosed which have strong anti-HIV activity although they had no sequence specificity to *HIV-1* gene (see page 46, lines 7-10). Consequently, it is disclosed that the inhibitory effect of oligonucleotides containing six-membered azasugars on HIV-1 replication was not mediated by a sequence specific antisense mechanism against *HIV-1* gene, but rather mediated by inhibiting virus attachment on the cell surface (see page 67, lines 22-26). However, one skilled in the art would have construed from this that the antiviral activity seen was due to the six-membered azasugars, the inventors taking such an extensive departure from standard oligonucleotides. Furthermore, regarding the efficacy of the oligonucleotides disclosed in this publication, it is mentioned that these oligonucleotides did not inhibit SIV replication (page 71, lines 1-9) and poliovirus replication (page 72, lines 3-5). Thus, the oligonucleotides taught in the WO 02/068582 reference had no influence on the replication of any other viruses but HIV-1 (as mentioned on page 72, lines 23-25).

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WO 03/097661

Regarding the WO 03/097661 publication, the Applicants wish to submit that by the nature of the sequences disclosed in this publication, it was concluded that the anti-HIV activity of phosphorothioate oligonucleotides of 37-mer or longer is sequence and structure independent (see page 20, lines 22-24 of WO 03/097661 publication). It is also important to note that all examples disclosed in this publication present in vitro results.

Applicants respectfully request that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08A be returned in accordance with MPEP § 609.

The Commissioner is hereby authorized to withdraw the fees in the amount of \$180.00 for the submission of an Information Disclosure Statement from Deposit Account No. 19-5113 as well as any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-5113.

Respectfully submitted,



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